

## SOLDERING

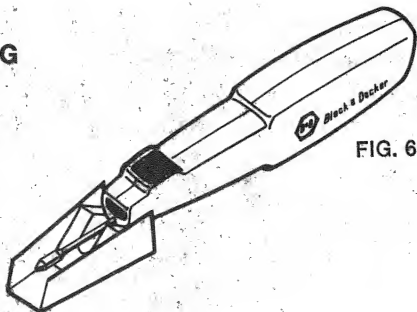


FIG. 6

First, make sure that wires, terminals or connections are free from grease or dirt — clean with knife or fine emery cloth. Be sure that the soldering tip has been freshly tinned.

When you press the switch button, the work light will come on and the tip will start heating immediately. In about 6 seconds, with light pressure, touch the tip to the connection, and at the same time, feed the solder to the spot being heated by the tip. After enough solder melts to just cover the connection, release the button, lift the tip and allow solder to cool. Do not disturb the connection until solder has hardened. Pencil can be placed in the bench rest between operations and when charging (Figure 6).

Do not keep the switch button depressed longer than needed to make the connection — usually 10 to 12 seconds. This will give longest battery life between charges. Also, do not keep the button depressed longer than about 6 seconds before transferring heat to the connection. This will prevent overheating the tip.

When you have finished soldering, heat the tip for about 6 seconds and wipe off solder on a damp (not wet) sponge. Reheat tip and apply a thin coat of fresh solder.

### DRESSING THE SOLDERING TIP

When one flat of the tip becomes pitted or has lost its flat surface loosen set screws and turn tip to other flat. When both flats have become pitted or rounded, they can be reshaped by rubbing the tip on emery cloth or by using a small, fine file.

The tip is expendable and will have to be replaced when worn out. Accessory tips are available from your dealer.

### RAPID EXCHANGE CONSUMER SATISFACTION GUARANTEE

MOST BLACK & DECKER CONSUMER PORTABLE POWER TOOLS AND LAWN AND GARDEN PORTABLE POWER TOOLS ARE GUARANTEED FOR ONE YEAR FROM DATE OF PURCHASE. IF ONE OF THESE PRODUCTS FAILS TO OPERATE TO YOUR COMPLETE SATISFACTION, IT WILL BE REPLACED FREE OF CHARGE WHEN RETURNED TO THE SELLER (IF A PARTICIPATING RETAILER) OR TO A BLACK & DECKER SERVICE CENTER.

In returning a tool for replacement proof of purchase is required and all original standard equipment must also be returned (for example, chuck, chuck key, auxiliary handles, circular saw blades). Expendable original equipment such as sanding sheets, belts and discs and jig saw blades need not be returned. For kits and assortments only the basic power tool will be replaced.

This Satisfaction Guarantee Rapid Exchange **does not** cover Commercial Duty tools, home workshop tools used in commercial service, lawn mowers, stationary tools, tools used in rental service or accessories. On these products a one year guarantee on defects will apply, excluding accessories. (such as soldering tips).

## THE BLACK & DECKER MFG. CO.

Towson, Md. 21204, U.S.A.

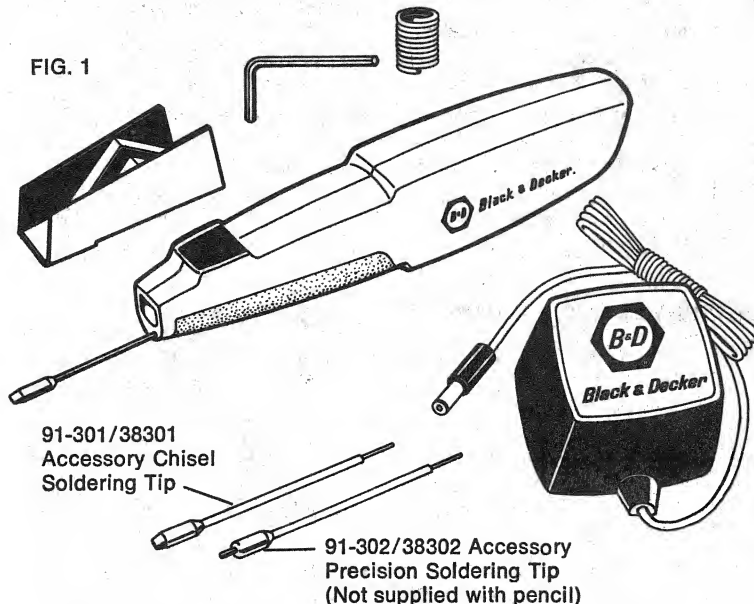


# Black & Decker

## OWNER'S MANUAL

### CORDLESS SOLDERING PENCIL

FIG. 1



91-301/38301  
Accessory Chisel  
Soldering Tip

91-302/38302 Accessory  
Precision Soldering Tip  
(Not supplied with pencil)

You can use this convenient, CORDLESS tool indoors, outdoors, anywhere! A built-in light illuminates the soldering area. It's perfect for hobbies, home repairs, and for electricians and repairmen. It will solder from 35 to 100 joints per charge, depending upon type of application. A finger-tip ON-OFF button is provided for safety and convenience.

For operational safety and proper use of the Soldering Pencil, please read all safety rules and instructions. Don't forget to send in the guarantee registration card.

THANK YOU FOR BUYING BLACK & DECKER!

### SOLDERING PENCIL SAFETY RULES

1. WHEN NOT IN USE, store the tool in a dry, high or locked-up place — out of the reach of children.
2. KEEP HANDS AWAY from hot metal front end of tool and be sure tip does not contact power cords or any other material that could be damaged by heat.
3. DO NOT use tool as a screwdriver or as a pry. This could damage the electrical components inside the tool.
4. DO NOT dip tool into any liquid, including liquid fluxes.
5. BEFORE CHANGING TIP allow it to cool.
6. DO NOT let children operate the pencil unless supervised by an adult.

## CHARGER & BATTERY SAFETY RULES

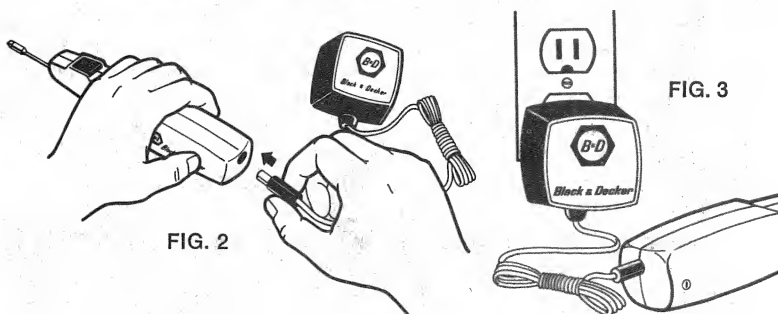
1. The Soldering Pencil and its Charger are specifically designed to work together. DO NOT attempt to charge the pencil with any other type of charger. DO NOT attempt to charge any other type of cordless tool with the Charger.
2. Do not attempt to open the tool housing to remove the battery. Battery replacement should only be accomplished at B&D Service Centers.
3. DO NOT store the Pencil in locations where the temperature may reach 120°F (such as outside sheds or metal buildings in summer).
4. DO NOT charge Pencil when temperature is BELOW +40°F or ABOVE +105°F. This is very important!
5. DO NOT incinerate the Pencil even if it is severely damaged or is completely worn out. The batteries can explode in a fire.
6. A small leakage of liquid from the battery cells may occur under extreme usage or temperature conditions. This does not indicate a failure. However, if the outer case seal is broken and this leakage gets on your skin —
  - (a) Wash quickly with soap and water.
  - (b) Neutralize with a mild acid such as lemon juice or vinegar.
  - (c) If battery liquid gets into your eyes, wash them with a strong solution of boric acid and seek immediate medical attention.
7. Never expose charger to weather; use indoors only.
8. The charger is designed to operate on standard household electrical power (120 volts). Do not attempt to use it on any other voltage!

## IMPORTANT CHARGING NOTES

THE BATTERY IN YOUR NEW SOLDERING PENCIL IS NOT FULLY CHARGED! First, read the Safety Rules above. Then follow charging notes and procedures below.

1. Longest life and best performance can be obtained if the battery is charged when the air temperature is about +75°F. DO NOT charge the battery in an air temperature below +40°F. or above +105°F. This is very important and will prevent serious damage to the battery.
2. If you have not left the battery on charge for a prolonged time, it will only accept about 80% charge the first time it is charged. However, after several charge and discharge cycles, the battery will be back up to its full capacity.
3. While charging, the Charger may hum and become warm to touch. This is a normal condition, and does not indicate a problem.
4. If the battery does not charge properly — (1) check power supply at receptacle by plugging in a lamp or other appliance, (2) check to see if receptacle is connected to a light switch which turns power off when you turn out the lights.
5. Whenever you unplug the Charger from its power supply, also disconnect the Pencil from the Charger.
6. Never expose Charger to weather; use indoors only.

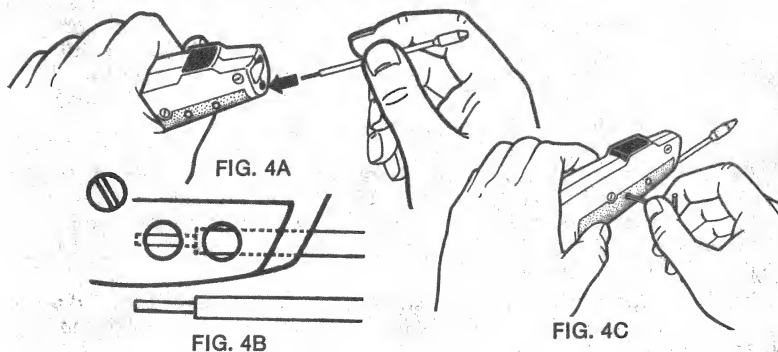
## CHARGING THE BATTERY



## CHARGING THE BATTERY Cont'd

1. Attach charger cord to Pencil as shown in Figure 2. Arrange cord so that it will not be exposed to any danger of being cut or damaged.
2. Plug Charger into any 120-Volt receptacle, Figure 3. Your tool is now on charge. CAUTION — This Charger can be used only with 120 volt, normal house current.
3. Recharging the tool requires, on the average, about 16 hours to reach full capacity. Don't worry about over-charging the tool as it can be left on charge indefinitely without harm. In fact, you can leave the tool on charge continuously so that it will always have a full charge and be ready when you need it. Or, remember to put your tool on charge the day before you need it and it will be ready to go at full charge.

## ATTACHING & REMOVING TIPS

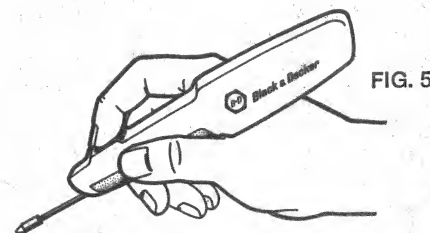


To attach tip, insert tip carefully into pencil with a slight turning motion (Figure 4A). Push firmly until tip stops. Be sure that larger diameter shaft is visible in the front set screw hole (Figure 4B). Turn tip until flat soldering surface is in the position convenient for your soldering job. Place first set screw from envelope on the allen wrench and tighten in rear hole (Figure 4C). Tighten set screw only enough to hold tip in pencil. Do not overtighten. Pull on tip gently to make certain that the screw is seated. Place the second set screw into the front hole and tighten.

To remove tip, allow it to cool. Then loosen both set screws and pull tip out. Remove forward set screw completely before installing another tip.

## SWITCH

Pressing the switch button turns the tool "ON" (Figure 5). The tip will quickly reach soldering temperature. Releasing the button turns the tool "OFF."



## TINNING

The soldering tip that comes with your Pencil has already been "tinned," that is, covered with a thin coating of solder. The tip should always be coated in this manner when not in use.

Just before soldering, the old tinning on the tip should be removed and fresh tinning applied. To do this, press the switch button until the coating of solder on the tip melts (about 6 seconds). Release switch and quickly wipe off both sides of tip on a damp sponge. Reheat tip and apply a fresh coating of solder to both sides of tip. You are now ready to solder.

Always use rosin core solder or rosin flux for electrical connections, never use acid core solder or acid flux.